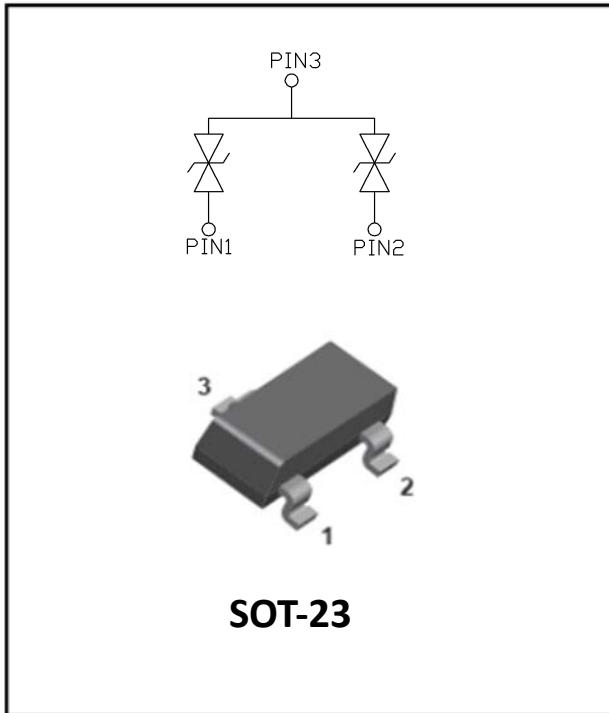


2-Line, Bi-directional, Transient Voltage Suppressor



Features

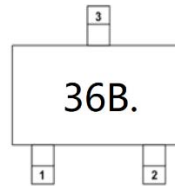
- Stand-off voltage: $\pm 36V$ Max
- Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 30kV$ (contact)
IEC61000-4-5(surge): 5A (8/20 μs)
- Low leakage current:
- Ultra low clamping voltage
- RoHS Compliant

Applications

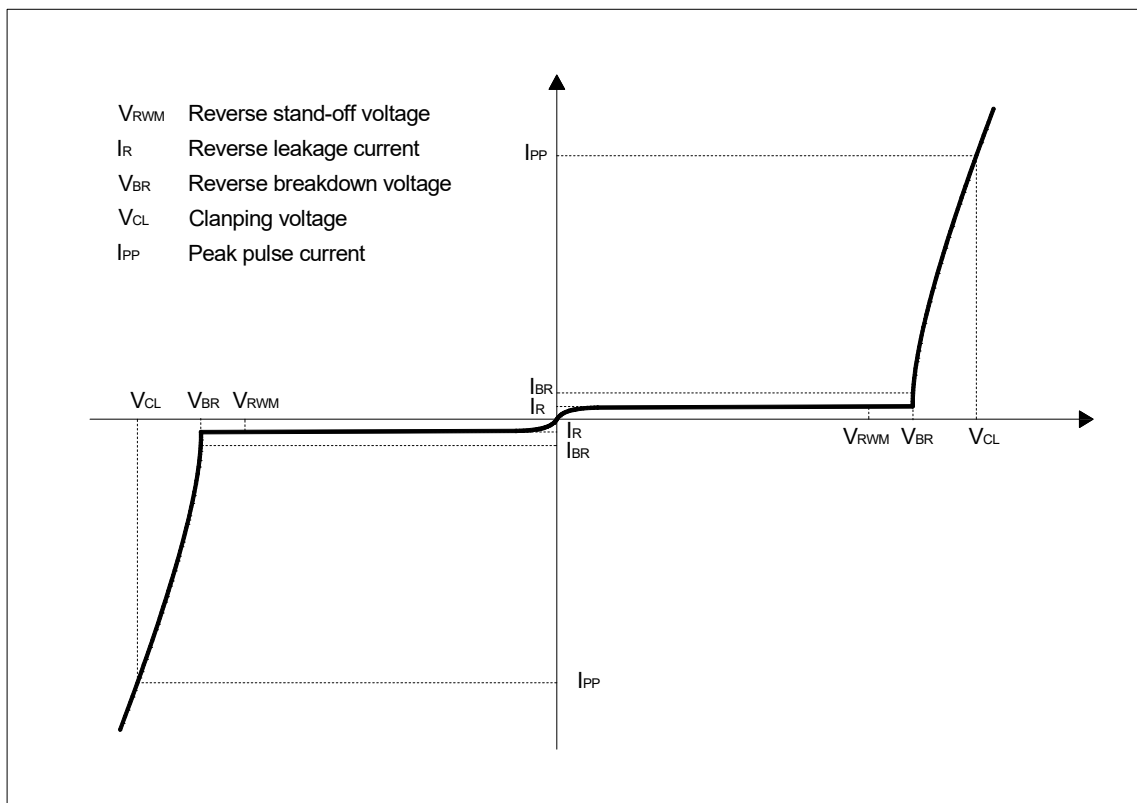
- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls
- Server and Desktop PC

Mechanical Data

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Moisture Sensitivity: Level 1 per J-STD-020
- Marking Information: See Below



■Definitions of electrical characteristics





ESD3602EB

■Maximum Ratings

| PARAMETER | SYMBOL | LIMITS | UNIT |
|-------------------------------------------------|-----------|----------|-------------|
| Peak pulse power ($t_p = 8/20\mu s$) | P_{pk} | 375 | W |
| Peak pulse current ($t_p = 8/20\mu s$) | I_{PP} | 5 | A |
| ESD according to IEC61000-4-2 air discharge | V_{ESD} | ± 30 | KV |
| ESD according to IEC61000-4-2 contact discharge | | ± 30 | |
| Junction temperature | T_J | 125 | $^{\circ}C$ |
| Storage temperature | T_{STG} | -55~150 | $^{\circ}C$ |

■Electrical Characteristics ($T_a=25^{\circ}C$ Unless otherwise specified)

| PARAMETER | Symbol | UNIT | Conditions | Min | Typ | Max |
|---------------------------------|-----------|---------|--------------------------------|------|-----|----------|
| Reverse maximum working voltage | V_{RWM} | V | | | | ± 36 |
| Reverse leakage current | I_R | μA | $V_{RWM} = 36V$ | | | 0.5 |
| Reverse breakdown voltage | V_{BR} | V | $I_T = 1mA$ | 39.6 | | 49 |
| Clamping voltage ¹⁾ | V_{CL} | V | $I_{PP} = 1A, t_p = 8/20\mu s$ | | | 58 |
| | | V | $I_{PP} = 5A, t_p = 8/20\mu s$ | | | 75 |
| Junction capacitance | C_J | pF | $V_R = 0V, f = 1MHz$ | | 13 | |

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(mg) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| ESD3602EB | F2 | Approximate 8 | 3000 | 30000 | 120000 | 7" reel |



■ Characteristics (Typical)

Fig.1 8/20μs waveform per IEC61000-4-5

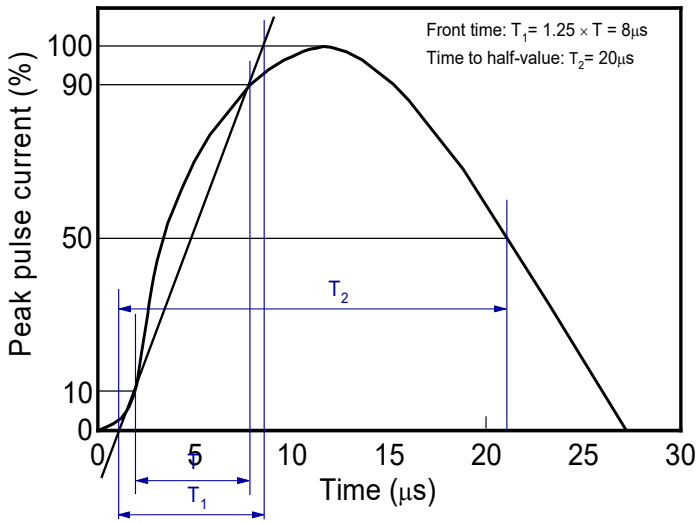


Fig.2 Contact discharge current waveform per IEC61000-4-2

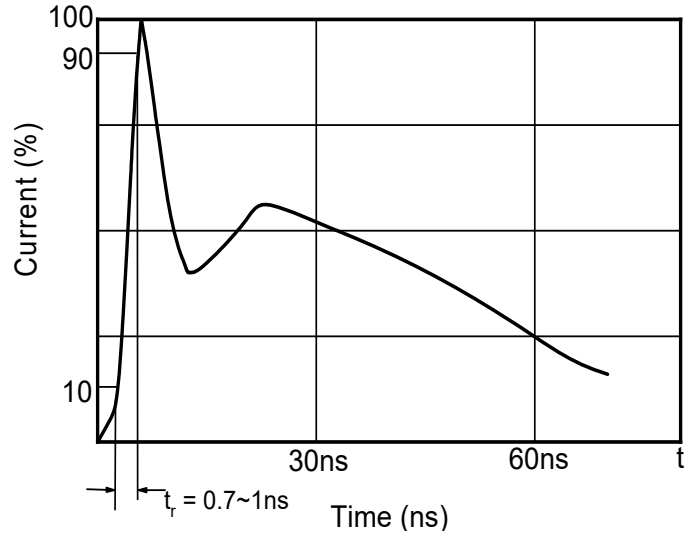


Fig.3 Clamping voltage vs. Peak pulse current

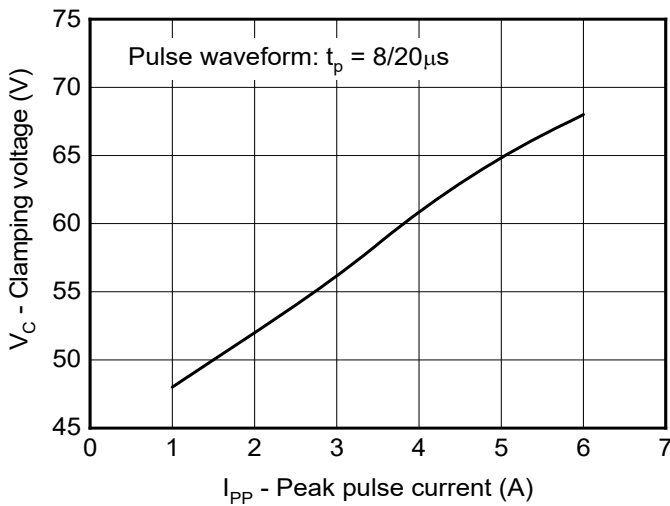


Fig.4 Capacitance vs. Reverse voltage

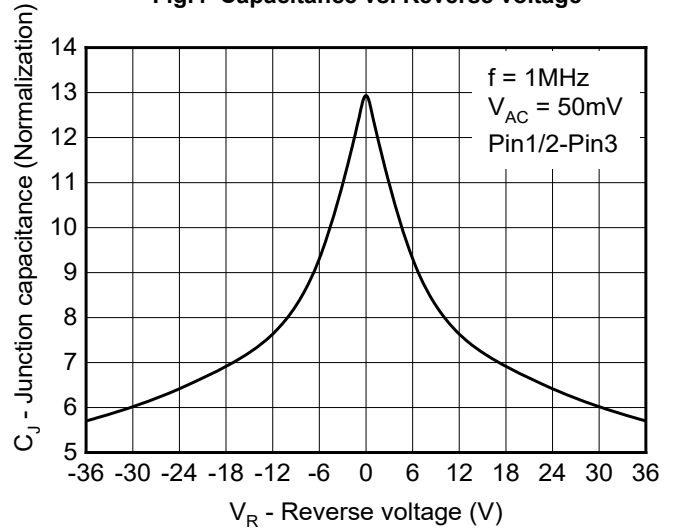


Fig.5 Non-repetitive peak pulse power vs. Pulse time

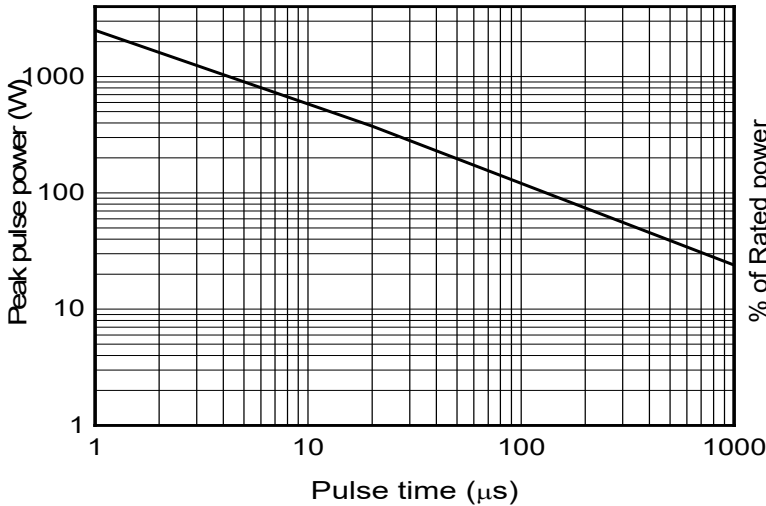


Fig.6 Power derating vs. Ambient temperature

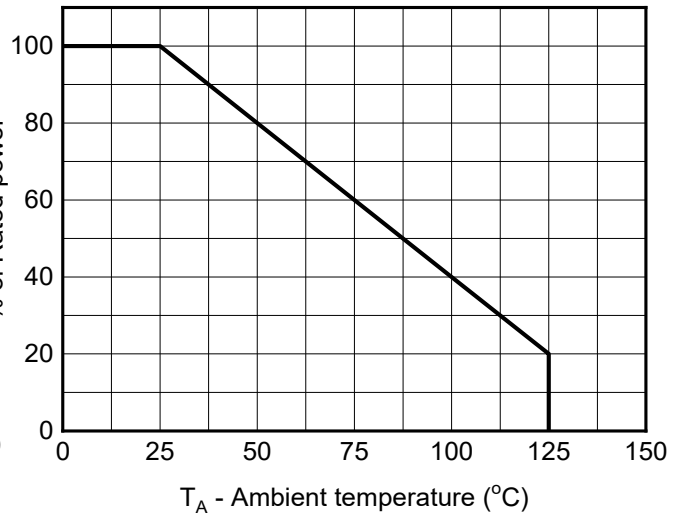
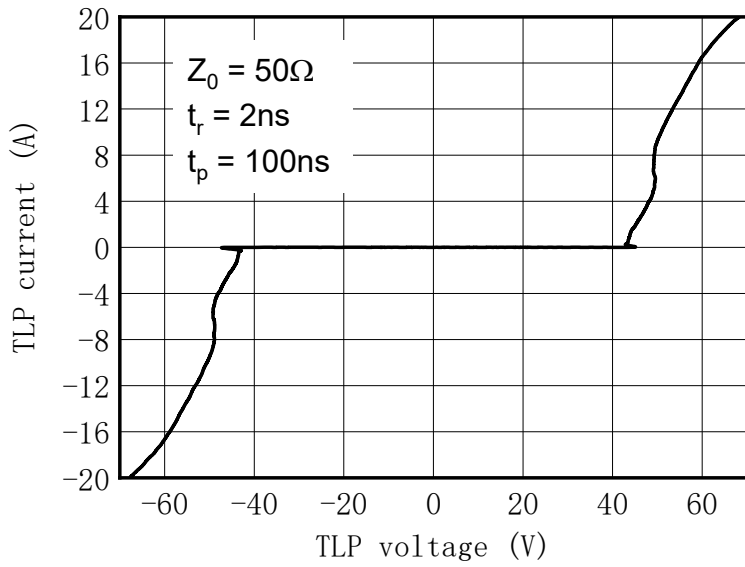
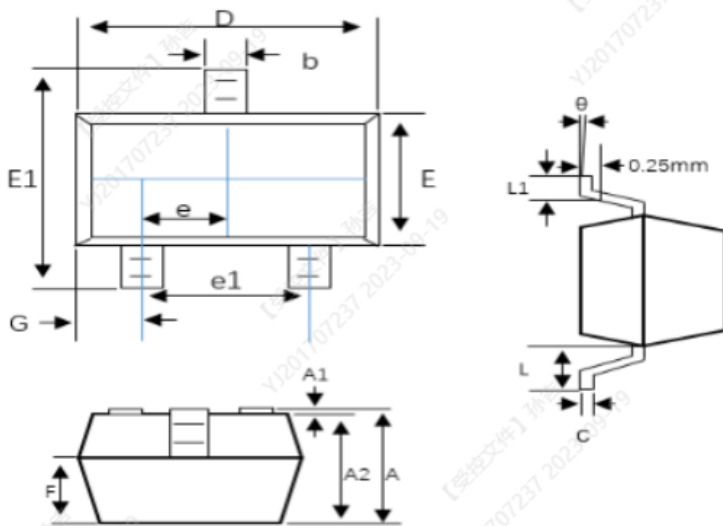


Fig.9 TLP Measurement

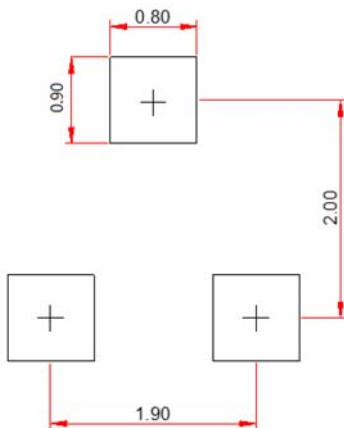


■ Outline Dimensions



| SOT-23-3L | | | |
|-----------|-------------|-------|-------|
| DIM | Millimeters | | |
| | Min | Typ | Max |
| A | 0.945 | 1.035 | 1.125 |
| A1 | 0.005 | 0.06 | 0.1 |
| A2 | 0.925 | 0.975 | 1.025 |
| b | 0.34 | 0.4 | 0.49 |
| c | 0.1 | 0.15 | 0.2 |
| D | 2.875 | 2.9 | 2.925 |
| E | 1.295 | 1.32 | 1.345 |
| E1 | 2.3 | 2.4 | 2.5 |
| e | 0.925 | 0.95 | 0.975 |
| e1 | 1.85 | 1.9 | 1.95 |
| G | 0.45 | 0.5 | 0.55 |
| F | 0.55 | 0.575 | 0.6 |
| L1 | 0.3 | 0.4 | 0.5 |
| L | 0.45 | 0.55 | 0.65 |
| θ | 0° | 4° | 8° |

■ Soldering Footprint





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